Yellowstone River
Conservation District Council

Yellowstone River Watershed National Wetlands Inventory Mapping

Grant Application
Montana Land Information Act
Fiscal Year 2009

APPLICATION FOR GRANT FUNDING

Applicant Information

1. Primary Applicant (Required):
Name of principle individual: Nicole McClain
Name of agency\entity: Custer County Conservation District
Street: 3120 Valley Drive East
City: Miles City
County: Custer
State: MT
Zip Code: 59301
Contact email address: YellowstoneRiver@aol.com
Contact fax address: 406-232-3965
Contact phone: 406-232-7905 ext 3
Organizational Unit (if applicable)
Department:
Division: Yellowstone River Conservation District Council

2. Other Project Participants or Partners - please list all:
The MTNHP is the primary partner however there are several others listed in Appendix 1.

Name of contact: Greg Kudray
Name of Agency: Montana Natural Heritage Program (MTNHP)
Street: 1515 East 6th Avenue
City: Helena
County: Lewis and Clark
State: MT
Zip Code: 59620-1800
Contact email address: gkudray@mt.gov
Contact phone: (406) 444-0915

3. Date Submitted (Required): 2/15/2008 **4. Date Received by State:**

5. Descriptive Title of Applicant's Project (Required):
Yellowstone River Watershed – National Wetland Inventory Mapping

Project Narrative
Limited to 5 pages (Times Roman 12 Font)

1. Project Goals & Objectives (Required) - ***Please summarize the problem to be solved, including past or present approaches that require change, and relate project goals specifically to one goal and objective of the 2009 Land Information Plan.***

The purpose of this project is to map wetlands and develop associated data for 54 USGS 1:24,000 quads in the Lower Yellowstone River Corridor as part of a larger multi-partner effort to complete wetland mapping in the Yellowstone River Watershed. The 2008 MLIA Wetland Data Theme Plan lists securing funding partnerships for mapping in Southeast MT (which is essentially the Lower Yellowstone River Watershed) as a focus for this year's Plan activities.

Wetland data is a priority MSDI framework layer. Unfortunately, Montana lags almost all other states; the National Wetland Inventory (NWI) was never completed here and large swathes of Montana have no wetland data available – even though wetlands are critical habitats of concern to economic development planners and resource managers. The Lower Yellowstone River Watershed is an area that almost completely lacks NWI data (<2% has NWI mapping).

This project relates to several goals of the 2008 Land Information Plan, but specifically addresses the following goal and objective:

Goal 1 – A statewide set of MSDI framework layers that are consistently collected, accurately maintained, and made commonly available.
Objective 1.1 - Funding and administrative support for local, tribal, state and federal data collection efforts that will help develop and maintain multi-jurisdictional MSDI framework layers.

The Governor and Directors of Montana DNRC, DFWP and DEQ endorsed the state's new wetland plan titled *Priceless Resources: A Strategic Framework for Wetland and Riparian Area Conservation and Restoration in Montana 2008-2012.* This *Strategic Framework* supports the MTNHP Wetland and Riparian Mapping Center as the standardized provider of wetland mapping in Montana, which provides consistency, accuracy and information availability to all citizens. All wetland data is approved and permanently maintained by the NWI with distribution available through the NWI or the MT Natural Resource Information Service.

The problem that requires solution is based in the lack of basic wetland spatial data (or necessary funds) for the Lower Yellowstone River and the Yellowstone Watershed in the face of increased development and river channel modification. In 1996 and 1997 back-to-back one hundred year flood events threatened human constructed features on the river and caused channel changes and large-scale erosion. Local communities filed over 100 applications for permits to armor or otherwise modify riverbanks. Subsequent legal battles led to a comprehensive cumulative effects study on the entire river. The federal study is led by the Corps of Engineers with the Yellowstone River Conservation District Council (YRCDC) as sponsor. However, while the YRDCD has approved a Wetland Scope of Work that will fund the 35 quads of wetland mapping necessary to complete a wetland cumulative effects study, funding for the rest of the Yellowstone River

Watershed must be found from other sources.

We are following the multi-partner approach advocated in the 2008 MLIA Wetland Data Theme Plan. We have financial commitments from the primary federal land management agencies in the area to finance their share of mapping in the watershed, and have other partners listed in Appendix 1, but we need additional funds to complete mapping along the Yellowstone River Corridor, which is mostly privately owned and likely contains over 80% of all the wetlands in the watershed.

2. Technical Approach (Required) - *Provide a written project plan along with hardware, software and staffing solutions if applicable. Please include (in order):*

a. Scope of Work

YRCDC intends to contract with the MTNHP, a program of the University of Montana, to develop digital wetland maps for 54 USGS 1:24,000 quads. This is part of a larger Yellowstone Watershed partnership mapping effort that funds the mapping of 261 additional quads, over one third of the entire Lower Yellowstone Watershed. Under the guidance of MTNHP ecologists, a wetland digitizing technician will delineate, digitize and classify wetlands and riparian areas in an ArcGIS environment using the protocols and procedures in *National Standards and Quality Components* (USFWS 2004*)*. The 2005 NAIP Color IR imagery for this area will be the image source for mapping. NRCS soil surveys, NHD high-resolution data, digital elevation models and other ancillary data sources will be used to increase mapping accuracy.

All map data will be produced using the standard protocols and conventions developed by the USFWS for image interpretation, cartography, and digitizing (USFWS 2004). Metadata will be produced using the ArcGIS metadata file structure in ArcCatalog. A personal geodatabase will be provided in Albers Equal Areas Conic projections with horizontal planar units in meters, using the NAD83 horizontal planar datum. All digital data will be provided in a geodatabase format consistent with that developed by the USFWS and will be incorporated into the national NWI master database.

Mapping also includes polygon attribution with hydrogeomorphic modifiers that link polygon types to wetland functions. Field reconnaissance trips will be conducted as necessary to determine whether polygons have been correctly classified, to review any questionable types, and to gather data on wetlands of particular ecological significance, which will be documented in the MTNHP site database. We will also identify wetlands areas suitable for restoration. Field data will be incorporated into the online MTNHP field guide to NWI types. QA/QC will follow *National Standards and Quality Components* (USFWS 2004*)* including final approval by the NWI regional coordinator.

b. Deliverables

Wetland and riparian area data will be digitized and classified by the MTNHP Wetland Mapping Center using USFWS standards (USFWS 2004). This proposal is requesting funding to map 54 USGS 1:24,000 quads along the Yellowstone River Corridor. Partner funding will be used to map an additional 261 quads in the Yellowstone River Watershed. Digitized and classified information will be field checked and the draft datasets will be submitted for QA/QC approval to

the NWI regional coordinator. The approved dataset will be included in the MSDI Wetland Framework data layer and linked to the NRIS website for public dissemination. The dataset will be incorporated into USFWS national NWI database and made available on the National NWI Mapper service provided by USFWS. Wetland areas suitable for restoration will also be identified. Field data will be incorporated into the online MTNHP wetland site database and online NWI field guide. A mapping example can be found at http://www.mtnhp.org/Community/wetlands/default.asp.

The Wetland Theme Plan targets wetland mapping, data collection and funding the continuance of the MTNHP Wetland and Riparian Mapping Center as priority tasks. This grant proposal directly addresses *Goal 1 – A statewide set of MSDI framework layers that are consistently collected, accurately maintained, and made commonly available. Objective 1.1 - Funding and administrative support for local, tribal, state and federal data collection efforts that will help develop and maintain multi-jurisdictional MSDI framework layers.* Significant partner funding and in-kind support have been obtained to further this data development effort, which addresses other Montana Land Information Plan goals.

The contractor has the capacity to accomplish the work in the required timeframe. The MTNHP Wetland and Riparian Mapping Center has increased its staff to three full-time digitizers to accomplish this and other wetland and riparian mapping for the MSDI Wetland Theme. The MTNHP now also administers the University of Montana Wildlife Spatial Analysis Laboratory, which gives them significant additional resources for wetland digitizing capacity, if necessary.

c. Acceptance Criteria

Project success will be achieved when all mapping has been completed, approved by the USFWS NWI regional coordinator, and incorporated into the national geodatabase. Ongoing progress can be measured by the number of quads completed and approved by the NWI regional coordinator.

The YRCDC will review and approve all deliverables including draft, digitized, and classified wetland and riparian data by the MTNHP Wetland Mapping Center, and quality assurance and quality control (QA/QC). QA/QC will follow *National Standards and Quality Components* (USFWS 2004*)* including final approval by the National Wetland Inventory (NWI) regional coordinator.

After initial delineations are made by a digitizing technician, draft mapping is 100% reviewed by a MTNHP ecologist or a different digitizing technician. Specific comments are then addressed and the mapping corrected by the wetland digitizing technician or areas are marked for field review. A final review is made after corrections and any necessary field review. After internal MTNHP approval, the mapping is sent to the regional NWI coordinator for review. Specific comments are addressed by MTNHP if necessary and final approval is made by the NWI regional coordinator. If new FGDC wetland mapping standards are implemented during the term of this contract, the MTNHP will follow those standards.

d. Timeline of Project See attached page.

e. Staff Roles and Responsibilities (grantee)

Existing MTNHP personnel will primarily fulfill these duties on contract to YRCDC. The MTNHP Wetland and Riparian Mapping Center includes three digitizing technicians and a Wetland Ecologist as the Center's manager. Nicole McClain, Coordinator of the YRCDC, will provide overall product review and acceptance, coordination with other funding partners, and grant project management. The Technical Advisory Committee of the YRCDC will provide technical oversight in behalf of the YRCDC.

3. Geography Affected (Required) - *Please describe the geographical area and jurisdictions that will be impacted by this project.*

This project involves mapping in 13 counties and 7 legislative districts. Virtually all population centers in the SE MT area are located along the Yellowstone River including Billings, the largest city in Montana, and several other cities. We define our study area, the Lower Yellowstone River Watershed, as the entire watershed in Montana with the exception of Park County, which has NWI mapping along the river corridor. We also include the Little Missouri River Watershed in southeastern MT because of the overall southeastern Montana focus in the Wetland Theme Plan. We are cooperating with the BLM and the Forest Service (the major federal land management agencies in the watershed), The US Army Corps of Engineers, the Montana FWP, the Montana DEQ Wetland Program, the US Environmental Protection Agency, and the Northern Great Plains Joint Venture. We will also advance the availability and use of this data to cities, watershed groups, and other conservation districts through our YRCDC activities.

YRCDC encompasses 11 counties that will directly benefit from the wetland mapping. Incorporating wetland mapping into a regional cumulative effects planning approach has buy-in by nearly every state and federal agency in addition to other organizations that have a vested interest in the Yellowstone River corridor. This effort shows good integration in a number of federal, state, and local initiatives (i.e. floodplain planning, 310 & 404 permit administration, restoration priority id, etc.).

4. Expected Benefits (Required) - *Describe the benefits that will accrue to both the applicant and other stakeholders.*

There is virtually no other information on wetlands in the Lower Yellowstone watershed, hampering conservation, management, and planning efforts in the region. This data will also form the initial baseline for any further monitoring or evaluation of the wetland resource. Wetland maps are a critical data source for resource management. User surveys have documented over 100 different uses of NWI maps with 70% of the users from the private sector.

Uses include floodplain planning, drinking water supply construction, waste facilities construction, transportation corridors, siting building locations, management and protection of wildlife habitat, and fisheries restoration. This wetland mapping does not directly relate to jurisdictional activities, which will always be an on-the-ground activity. However, this mapping is a key preliminary data source that is effectively used in economic development planning. Avoiding key wetland concentrations for energy production and other economic developments will streamline projects and protect all the resources that depend on wetlands. Some grants to stimulate conservation require an analysis of wetlands affected, this mapping will provide the

information needed to make federal funds (such as North American Wetland Conservation Act) easier to obtain.

5. On-going commitment and maintenance (Required) - *Describe the applicant's solution to the sustainability of the project.*

This project will result in data incorporated into the National Wetlands Inventory national geodatabase maintained by the USFWS. http://wetlandsfws.er.usgs.gov/NWI/index.html. There are no concerns about the commitment of the USFWS to maintain this national database and continue public availability of information. NRIS and the MTNHP have an ongoing responsibility and capability to disseminate geospatial and biological data within Montana.

6a. Detailed Budget (Required) - *Please provide a short written budget summary along with the table. If this is a multi-year request please copy the table below and label each table by fiscal year – FY2009, FY2010, etc*

YRCDC intends to contract with the MTNHP Wetland and Riparian Mapping Center to complete the project deliverables. A 10% YRCDC administrative cost is included in order to process the grant and contract. YRCDC contractor contributions include $42,915 for the Channel Migration Zone mapping project, which provides ancillary information to assist with NWI wetland mapping. YRCDC personnel contributions are based on 40 hours of coordination, 20 hours of project assistance, and 50 hours of project oversight from the YRCDC Technical Advisory Committee and Council members. MTNHP in-kind contractor contributions total $7,496. Other partner cash contributions total $229,150. See Appendix 1 for list of partners included in "Other Partners" and amount of financial contribution.

Category	Applicant Share (including in-kind)	MLIA Share	Other Share (Contractor in-kind)	Partner Share	Total
a. Personnel	$ 3,762		$ 4,330	$ 107,421	$ 115,513
b. Fringe Benefits			$ 1,917	$ 66,731	$ 68,648
c. Travel				$ 6,413	$ 6,413
d. Equipment					
e. Supplies				$ 400	$ 400
f. Contractual	$ 42,915	$67,500			$110,415
g. Other		$ 6,750		$ 900	$ 7,650
h. Indirect			$ 1,249	$ 47,285	$ 48,534
Totals	$ 46,677	$74,250	$ 7,496	$ 229,150	$357,573

6b. *Provide a separate budget summary for each participant (including subcontracts).*

Category	Applicant (MLIA request)	MTNHP	2nd Partner	Total
a. Personnel		$ 34,907		$ 34,907
b. Fringe Benefits		$ 17,680		$ 17,680
c. Travel		$ 2,863		$ 2,863
d. Equipment				
e. Supplies		$ 100		$ 100
f. Contractual				
g. Other	$6,750	$ 700		$ 7,450
h. Indirect		$ 11,250		$ 11,250
Totals	$6,750	$ 67,500		$ 74,250

7. Statements of support must be included from any party listed as a partner. Other statements of support will not be evaluated and should not be submitted (not counted toward 5 page limit)

Some statements of financial support are attached, remaining statements will be mailed directly to Stewart Kirkpatrick.

8. Renewable Grant Accountability Report - If you received a 2008 MLIA Grant you must file a report documenting the progress you have made toward meeting the requirements of that grant

9. Authorized Signature

Authorizing Statement
I hereby certify that the information and all statements in this application are true, complete and accurate to the best of my knowledge and that the project or activity complies with all applicable state, local and federal laws and regulations.
I further certify that this project will comply with applicable statutory and regulatory standards.
I further certify that I am (we are) authorized to enter into a binding agreement with the Montana Department of Administration to obtain a grant if this application receives approval.

_____ Date_____

_____

Signature and Title of Authorized Representative(s) of Public Entity Applicant

Yellowstone River Watershed National Wetland Inventory Mapping –Project Timeline

FY 2009 1st Quarter – Begin mapping and field checking by MTNHP staff and partners. Begin QAQC process on mapping. Submit blocks of mapped quads (scheduled deliverables) that have passed internal QAQC to the Regional NWI Coordinator for final approval.

FY 2009 2nd Quarter – Continue mapping, field checking, and QAQC. Submit blocks of mapped quads (scheduled deliverables) that have passed internal QAQC to the Regional NWI Coordinator for final approval.

FY 2009 3rd Quarter – Continue mapping, field checking, and QAQC. Submit blocks of mapped quads (scheduled deliverables) that have passed internal QAQC to the Regional NWI Coordinator for final approval.

FY 2009 4th Quarter – Continue mapping, field checking, and QAQC. Submit blocks of mapped quads (scheduled deliverables) that have passed internal QAQC to the Regional NWI Coordinator for final approval.

Appendix 1 – Yellowstone River Watershed National Wetland Inventory Mapping Summary of Financial Support

This project is strongly supported within the local community and among state and federal agencies as indicated in the table below.

Partner	Contact Person	Amount	Status
MT DEQ Wetland Program	Lynda Saul	$ 2,000	Committed
U.S. Bureau of Land Management	Mike Philbin, Billings, MT	$ 104,000	Committed
U.S. Forest Service – Custer National Forest	Jeff Dibenedetto, Billings, MT	$ 63,200	$54,400 is committed, the remaining $8,800 is likely before the end of FY 2009
Northern Great Plains Joint Venture	Ken Sambor	$ 2,000	Committed
MT Fish Wildlife and Parks	Chris Hunter, Helena, MT	$ 1,000	Committed
US Environmental Protection Agency (administered by MT-DEQ)	Lynda Saul	$ 13,200	Committed
US Army Corps of Engineers	Greg Johnson	$ 43,750	The Corps has entered into a cost-share agreement with the YRCDC obligating these funds, funds are yet to be appropriated
Total		$ 229,150	